

TECHNICAL INFORMATION AND SERVICE DATA

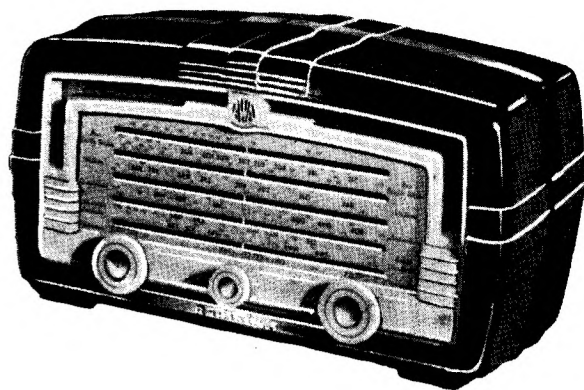


Model 565-MA

FIVE VALVE, BROADCAST, A.C. OPERATED
SUPERHETERODYNE

ISSUED BY:

AMALGAMATED WIRELESS (AUSTRALASIA) LTD.



ELECTRICAL SPECIFICATIONS

Frequency Range 540-1600 Kc/s.
(555-187.5 Metres)

Intermediate Frequency 455 Kc/s.

Power Supply Rating 200-260 volts
50-60 C.P.S.
(Models are produced with other voltage and frequency ratings.)

Power Consumption 40 watts

Loudspeaker:

5 inch permanent magnet.
Part No. 20874.
Transformer Part. No. 31772E.
V.C. Impedance 3 ohms at 400 C.P.S.

Undistorted Power Output 3 watts

Valve Complement:

- (1) 6BE6 Converter
- (2) 6BA6 I.F. Amplifier
- (3) 6AV6 Detector, A.F. Amplifier, A.V.C.
- (4) 6AQ5 Output.
- (5) 6X4 Rectifier.

Chassis Removal:

(1) Remove the control knobs by pulling them straight off their spindles.

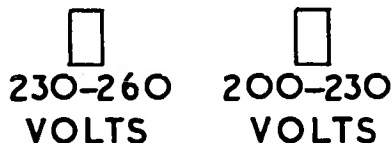
(2) Remove two nuts from the top of the cabinet back, two screws from underneath the cabinet back and withdraw it.

(3) The chassis is held to the cabinet front by two screws situated under it. Removal of these enables the chassis to be withdrawn.

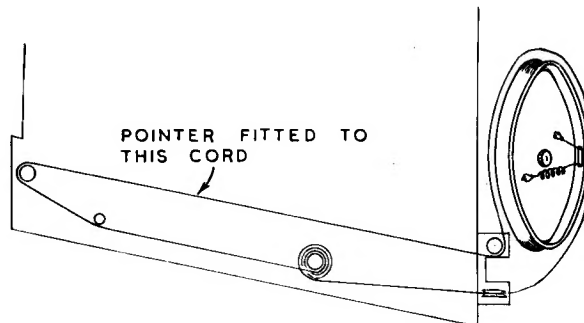
Connection to Power Supply:

The receiver should not be connected to any circuit supplying other than alternating current from 200-260 volts and at the frequency stated on the label inside the cabinet.

RED DOT INDICATES COMMON CONNECTION FOR ALL VOLTAGES.

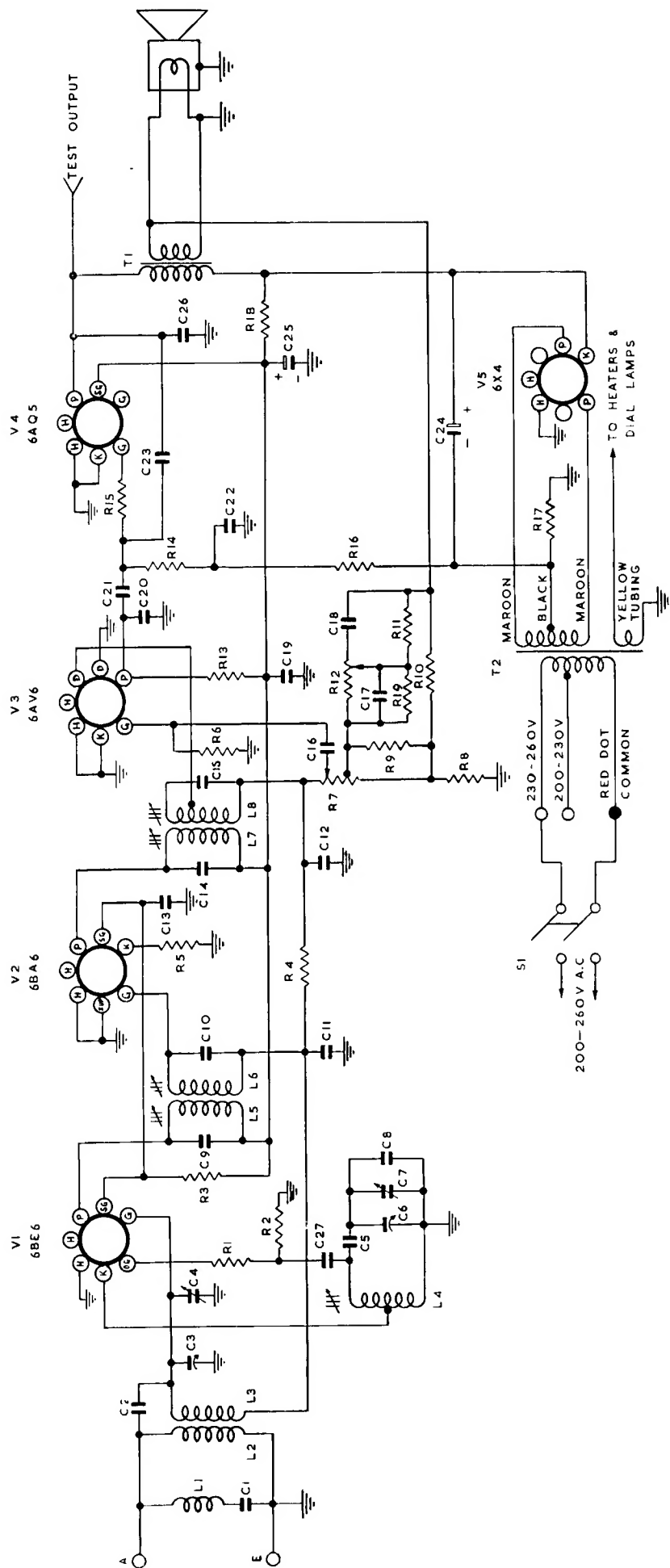


The power supply connections are shown in the accompanying diagram.



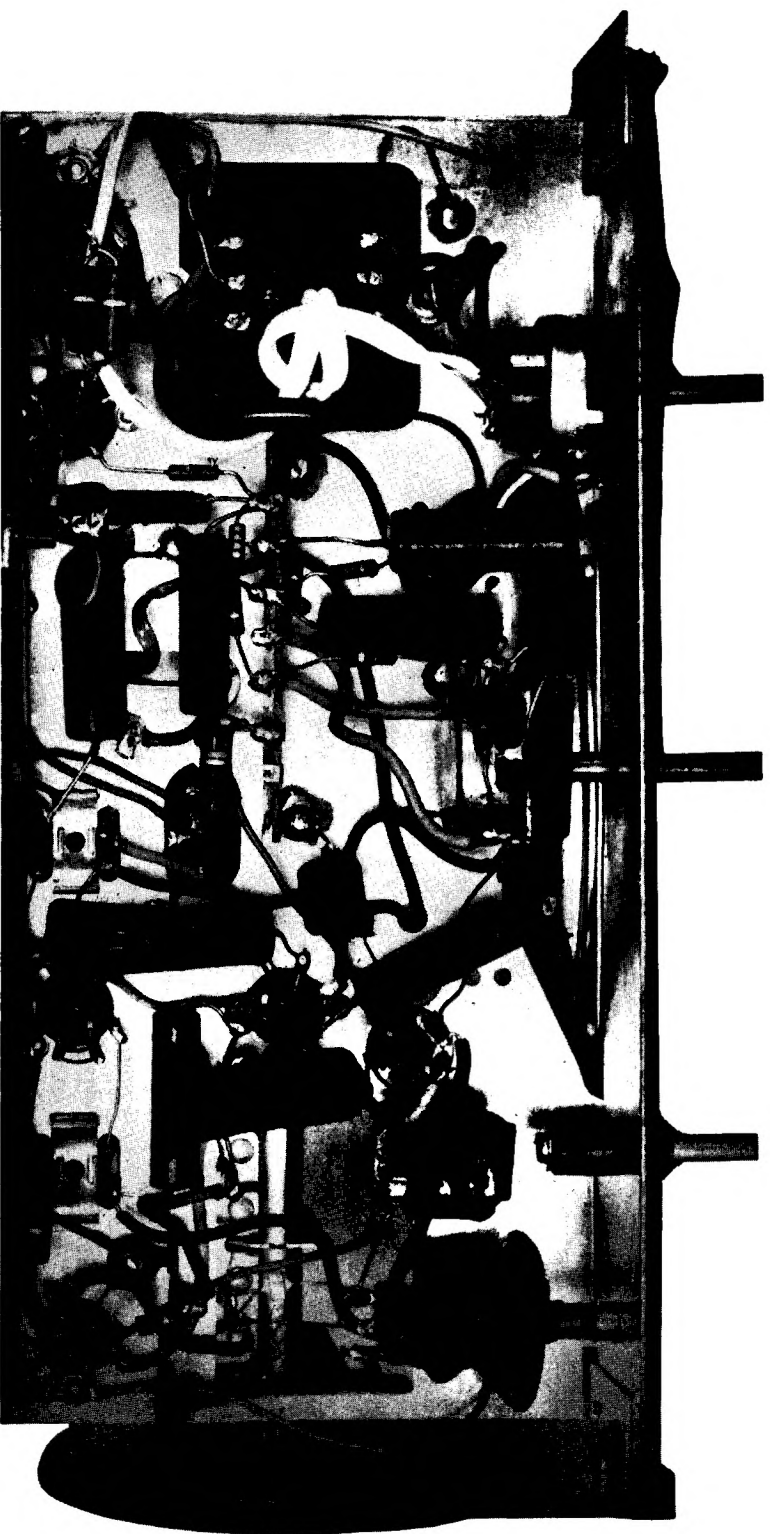
Tuning Drive Cord Replacement:

The accompanying diagram shows the route of the cord and the method of attachment.



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

A B C D E F G H I J K



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

FIG. 2

A B C D E F G H I J K

ALIGNMENT PROCEDURE

Manufacturer's Setting of Adjustments:

The receiver is tested by the manufacturer with precision instruments and all adjusting screws are sealed. Realignment should be necessary only when components in tuned circuits are repaired or replaced or when it is found that the seals over the adjusting screws have been broken.

It is especially important that the adjustments should not be altered unless in association with the correct testing instruments listed below.

Under no circumstances should the plates of the ganged tuning capacitor be bent, as the unit is accurately aligned during manufacture and cannot be readjusted unless by skilled operators using special equipment.

For all alignment operations, connect the "low" side of the signal generator to the receiver chassis, and keep the generator output as low as possible to avoid A.V.C. action. Also, keep the volume control in the maximum clockwise position.

Testing Instruments:

(1) A.W.A. Junior Signal Generator, type 2R7003, or

(2) A.W.A. Modulated Oscillator, series J6726.

If the modulated oscillator is used, connect a 0.25 megohm non-inductive resistor across the output terminals.

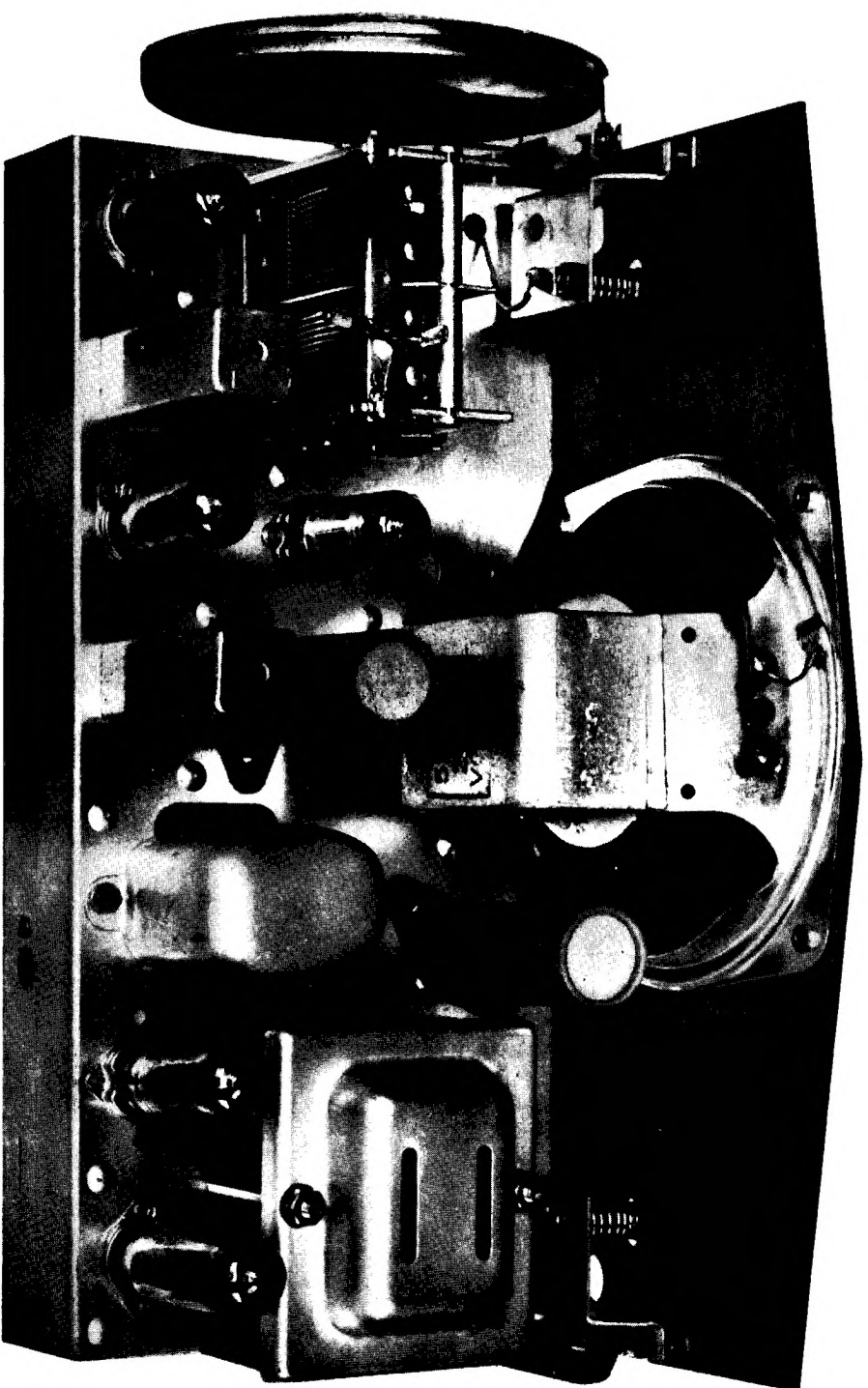
(3) A.W.A. Output Meter, type 2M8832.

ALIGNMENT TABLE

Alignment Order	Connect "high" side of Generator to:	Tune Generator to:	Tune Receiver Dial to:	Adjust for Maximum Peak Output:
1	Aerial Section of Gang (Drive End)	455 Kc/s.	540 Kc/s. (4QL)	L8 Core
2	Aerial Section of Gang (Drive End)	455 Kc/s.	540 Kc/s. (4QL)	L7 Core
3	Aerial Section of Gang (Drive End)	455 Kc/s.	540 Kc/s. (4QL)	L6 Core
4	Aerial Section of Gang (Drive End)	455 Kc/s.	540 Kc/s. (4QL)	L5 Core
Repeat the above adjustments until the maximum output is obtained.				
5	Aerial Lead	600 Kc/s.	600 Kc/s. (7ZL)	L.F. Osc. Core Adj. (L4)*
6	Aerial Lead	1500 Kc/s.	1500 Kc/s. (3AK)	H.F. Osc. Adj. (C7)
7	Aerial Lead	1500 Kc/s.	1500 Kc/s. (3AK)	H.F. Aer. Adj. (C4)
Repeat adjustments 5, 6 and 7.				

* Rock the tuning control back and forth through the signal.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



A B C D E F G H I J K L

A B C D E F G H I J K L

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

FIG. 1.

MECHANICAL REPLACEMENT PARTS

Cabinet Back	32412
Cabinet Body	32410
Grille and Scale Assembly	31902
Knob, Tone, Tuning	31341
Knob, Volume	31342
Nameplate	27748
Nameplate, numeral	33102
Pointer	31346
Valve Socket Assembly	19965

When ordering, always quote the above part numbers and in the case of coloured parts, such as cabinet, knobs, etc., the colour plus the part number.

D.C. RESISTANCE OF WINDINGS

Winding	D.C. Resistance in ohms.
Aerial Coil:	
Primary (L2)	3
Secondary (L3)	2
Oscillator Coil (L4)	5
I.F. Filter (L1)	17.5*
I.F. Transformer Windings	15
Power Transformer (T2)	
Primary	50
Secondary	450
Loudspeaker Input Transformer (T1)	
Primary	425 or 430
Secondary	†

† Less than 1 ohm.

* In some receivers this reading may be as high as 60 ohms.

The above readings were taken on a standard chassis, but substitution of materials during manufacture may cause variations and it should not be assumed that a component is faulty if a slightly different reading is obtained.

SOCKET VOLTAGES

VALVES	Cathode to Chassis Volts:	Screen Grid to Chassis Volts:	Anode to Chassis Volts:	Anode Current mA:	Heater Volts:
6BE6 Converter	—	85	165	1.8	6.3
68A6 I.F. Amp.	1.6	85	165	5.5	6.3
6AV6 Det., A.F. Amp., A.V.C.	—	—	80*	0.3	6.3
6AQ5 Output	—	165	250	28	6.3
6X4 Rectifier	255	—	245/245 AC. R.M.S.	—	6.3

Volts across back-bias resistor R14 = 8 volts.

Total H.T. Current = 48 mA.

Measured at 240 volts A.C. supply. No signal input. Volume Control maximum clockwise. Voltmeter 1000 ohms per volt; measurements taken on highest scale giving accurate readable deflection.

* This reading may vary depending on the resistance of the voltmeter used.

CIRCUIT CODE – RADIOILA 565MA

Code No.	Description	Part No.	Fig. No.	Location
L1	INDUCTORS	9382	2	E14
L2, L3	I.F. Filter (including C1)	30768	2	D16
L4	Aerial Coil 540-1600 Kc/s.	32406	2	E13
L5, L6	Oscillator Coil 540-1600 Kc/s.	27351	1	J5
L7, L8	1st I.F. Transformer	27353	1	J9
R1	2nd I.F. Transformer			
R2	RESISTORS			
R3	100 ohms		2	H16
R4	22,000 ohms		2	H17
R5	10,000 ohms		2	J15
R6	2.2 megohms		2	D12
R7	220 ohms		2	J12
R8	10.0 megohms		2	G12
R9	0.5 megohms Volume Control	27145	2	D9
R10	(Tapped at 40,000 ohms)			
R11	50 ohms		2	C9
R12	2,200 ohms		2	D9
R13	1,000 ohms		2	F7
R14	2,200 ohms		2	G7
R15	0.1 megohm Tone Control	26441	2	C5
R16	(including S1)			
R17	0.27 megohms		2	G9
R18	0.47 megohms		2	G7
R19	47,000 ohms		2	G6
	0.47 megohms		2	F7
	150 ohms		2	H2
	5,000 ohms		2	H4
	10,000 ohms		2	E8
	CAPACITORS			
C1	47 μF Silvered Mica		2	E14
C2	6.8 μF Ceramic		2	F15
C3	12-445 μF Tuning	18679	1	G4
C4	2.20 μF Trimmer (on gang)		1	G3
C5	440 μF padder ± 2½%		2	G13
C6	12-445 μF Tuning	18679	1	G6
C7	2.20 μF Trimmer (on gang)		1	G5
C8	9 μF mica (not used in later models)		1	G5
C9	100 μF Silvered Mica (in 1st I.F.)		1	J5
C10	100 μF Silvered Mica (in 1st I.F.)		1	J5
C11	0.05 μF paper 200V working		2	H13
C12	220 μF ceramic		2	H11
C13	0.05 μF paper 400V working		2	G11
C14	100 μF Silvered Mica (in 2nd I.F.)		1	J9
C15	100 μF Silvered Mica (in 2nd I.F.)		1	J9
C16	0.01 μF paper 600V working		2	D11
C17	0.1 μF paper 200V working		2	C7
C18	0.1 μF paper 200V working		2	D7
C19	0.05 μF paper 400V working		2	J8
C20	100 μF mica		2	F11
C21	0.025 μF paper 400 V working		2	G8
C22	0.1 μF paper 200 V working		2	E8
C23	9 μF mica		2	H6
C24	24 μF 350 P.V. Electrolytic		1	E12
C25	24 μF 350 P.V. Electrolytic		1	G9
C26	0.0025 μF paper 600 V working		2	J3
C27	47 μF Silvered Mica (added in later models)			
T1	TRANSFORMERS			
	Loudspeaker Transformer	XA2	1	H12
	Power Transformer 50-60 C.P.S.	25807	1	F15
	40 C.P.S.	25809		
	LOUDSPEAKERS			
	5" permanent magnet	20875	1	C10
	SWITCHES			
S1	Power switch (on R12)		2	C5